SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name | Examiner # : | Date
Art Unit | Phone Number 30 | Serial Number
Mail Box and Bldg Room Location | Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention

Inventors (please provide full names):

Earliest Priority Filing Date:

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Point of Contact:

****

STAFF USE ONLY | Type of Search | Vendors and cost where applicable

STN

FILE 'REGISTRY' ENTERED AT 15:
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES:
DICTIONARY FILE UPDATES:

TSCA INFORMATION NOW CURRENT THROUGH July , 2

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTE/

d ide can tot

L1 ANSWER 1 OF 18 REGISTRY COPYRIGHT
RN 149088-98-2 REGISTRY
CN Propanimidamide, 2,2'-azobis[2-methyl-, monohydrochloride (9CI) (CA INDEX
NAME)
MF **C8 H18 N6 . Cl H**
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, USPATFULL
(*File contains numerically searchable property data)
CRN (13217-66-8)

NH

NH_2 NH

NH_2

NH NH

Point of Contact:

MF C H4 O . C H Cl3 . H2 O
SR MEOH
NR CA
LC STN Files: ...

    M 1

    CRN 7732-18-5
    CMF H2 O

    CM 2

    CRN 67-66-3
    CMF C H Cl3

    CM 3

    CRN 67-56-1
    CMF C H4 O

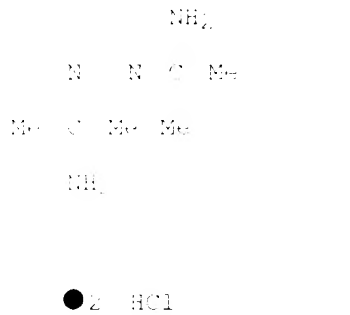
4 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 119:147544

REFERENCE 2: 119:70754

...

L1 ANSWER ... OF 1... REGISTRY ...
RN 88434-33-8 REGISTRY
CN 2-Propanamine, 2,2'-azobis-, dihydrochloride ... ... INDEX NAME
OTHER NAMES:
CN 2,2'-Azobis(2-aminopropane) dihydrochloride
...
FS ...
MF C6 H16 N4 . 2 Cl H
...



●2 HCl

10 REFERENCES IN FILE [illegible]

10 REFERENCES IN FILE [illegible]

REFERENCE 1: 135:344911

REFERENCE 2: [illegible]

REFERENCE 3: [illegible]

REFERENCE 4: 133:99144

REFERENCE 5: 130:53714

REFERENCE 6: 129:82088

REFERENCE 7: 128:226212

REFERENCE 8: 127:221134

REFERENCE 9: 107:200588

REFERENCE 10: [illegible]

L41 ANSWER 4 OF 10 REGISTRY [illegible]

RN [illegible]

CN 2-Propanamine, 2,2'-azobis-, hydrochloride (9CI) (CA INDEX NAME)

MF **C6 H16 N4 . x Cl H**

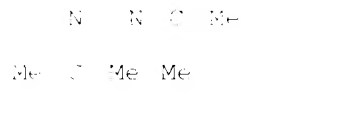
LC STN Files: [illegible]

[illegible]

REFERENCE 4: [illegible]

REFERENCE [illegible]

L4 ANSWER 5 OF 14 REGISTRY [illegible]
RN 4155c-11-0 REGISTRY
CN 2-Propanamine, 2,2'-azobis- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN **2,2'-Azobis(2-aminopropane)**
FS 3D CONCORD
MF C6 H16 N4
CI COM
LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, TOXLIT, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE 'A [illegible]' TO DATE
8 REFERENCES IN FILE 'APLIT [illegible]' TO DATE

REFERENCE 1: 135:[illegible]

REFERENCE 2: 134:57011

REFERENCE 3: 124:173953

REFERENCE 4: 118:2823

REFERENCE 5: 115:300507

REFERENCE [illegible]

[illegible]

[illegible]

L4 ANSWER [illegible]
RN **39307-32-9** REGISTRY
CN Methanol, mixt. with trichloromethane [illegible] (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Methane, trichloro-, mixt. [illegible]
FS 3D CONCORD
MF [illegible]
CI MXS
LC [illegible]
C H4 O . C H Cl3

[illegible]

CM 2

CRN 67-56-1
CMF C H4 O

27 REFERENCES IN FILE CA (1967 TO DATE)
27 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 136:208666

REFERENCE 2: 135:311181

REFERENCE 3: 130:82477

REFERENCE 4: 126:248996

REFERENCE 5: 126:183500

REFERENCE 6: 126:88341

REFERENCE 7: 123:264117

REFERENCE 8: 122:209653

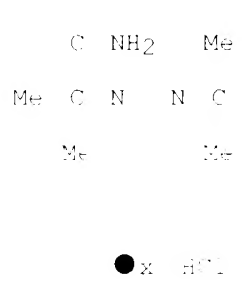
REFERENCE 9: 111:232451

REFERENCE 10: 111:173447

L81 ANSWER 7 OF 18 REGISTRY COPYRIGHT 2007 ACS
RN 25327-62-2 REGISTRY
CN Propionamidine, 2,2'-azobis(2-methyl-, hydrochloride (1:2)
OTHER NAMES:
CN AP 1509
FS C8 H18 N6 . x H I
MF
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, EINECS, MEDLINE, TOXCENTER, USPATFULL

[illegible]

[illegible]
[illegible]
IN Propionamidine, 2,2'-azobis[2-methyl-, hydrochloride (1:2), [illegible]
    NAME.
OTHER CA INDEX NAMES:
CN Propionamidine, 2,2'-azobis[2-methyl-, hydrochloride (1:2), [illegible]
RR 2997-92-4
MF **C8 H18 N6 . x Cl H**
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMLIST,
      IFICDB, IFIPAT, IFIUDB, TOXCENTER, TOXLIT, USPATFULL
        (*File contains numerically searchable property data
    Other Databases: MEDLINE, TOXA*
        (**Enter CHEMLIST File for additional information)
[illegible]



●x HCl

40 REFERENCES IN FILE CA (1907 - [illegible])
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
40 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1907)

REFERENCE 1: 114:63590

REFERENCE 2: 114:44093

REFERENCE 3: [illegible]

REFERENCE 4: [illegible]

REFERENCE 5: [illegible]

REFERENCE 6: [illegible]

REFERENCE 7: 111:194548

REFERENCE 8: [illegible]

REFERENCE 9: [illegible]

[illegible]
[illegible]

FS 3D CONCORD
MF C8 H18 N2
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFO, CHEMLIST, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, NIOSHTIC, PHIND, PROMT, RTECS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

NH

C NH_2 Me NH

Me C N N C C NH_2

Me Me

PROPERTY DATA AVAILABLE IN THE 'IDE' FORMAT

58 REFERENCES IN FILE CA (1967 - 2006)
5 REFERENCES TO NON-SUBSTANCE INFORMATION IN FILE CA
58 REFERENCES IN FILE CAPLUS (1967 - 2006)
2 REFERENCES IN FILE CA DUPLICATE ANSWER

REFERENCE 1: 135:221407

REFERENCE 2: 135:106569

REFERENCE 3: 135:1420

REFERENCE 4: 134:372149

REFERENCE 5: 134:363592

REFERENCE 6: 134:208304

REFERENCE 7: 134:5187

REFERENCE 8: 133:297432

REFERENCE 9: 133:274419

REFERENCE 10: 133:14417

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
RN 9041-08-1 REGISTRY
CN Heparin, sodium salt (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Alta 5000
CN Alta 5M
CN Alta 7000
CN Alta 7M

CN Heparin sodium
CN Liquemin
CN Logiparin
CN Lovenox
CN Minolteparin sodium
CN Normiflo
CN OP 2000
CN Parnaparin sodium
CN PK 10169
CN Reviparin sodium
CN RO 11
CN Sodium acid heparin
CN Sodium heparin
CN Sodium heparinate
CN Tinzaparin sodium
CN WY 90493RD
DR 12656-11-0, 101921-26-0, 102785-31-9
MF Unspecified
CI PMS, COM, MAN
PCT Manual registration, Polyester, Polyester normal
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS,
      BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CBNB, CHEMCATS, CHEMLIST, CIN,
      CSCHEM, DDFU, DETHERM*, DIOGENES, DRUGU, DSL**, EMBAL, ENCOMPLIT,
      EMBASE, IFICDB, IFIPAT, IFIUDB, IMSA, MEDLINE, MRCK*, NAPRALERT, NTIS,
      PHAR, PHARMASEARCH, PROMT, RTECS*, TOXCENTER, TOXLIT, USAN, USPATFULL
        (*File contains numerically searchable property data)
      Other Sources: DSL**, TSCA**, WHO
        (**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
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                [illegible] REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
              [illegible] REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: [illegible]

REFERENCE 2: [illegible]

REFERENCE 3: [illegible]

REFERENCE 4: [illegible]

REFERENCE 5: [illegible]

REFERENCE 6: [illegible]

REFERENCE 7: [illegible]

[illegible]

CN Bemiparin
CN Certoparin
CN Clexane
CN Dalteparin
CN Enoxaparin
CN Fluxum
CN FR 860
CN Fragmin A
CN Fragmin B
CN Fraxiparin
CN Heparin sulfate
CN Heparinic acid
CN Kabi 2
CN Miniparin
CN Nadroparin
CN PK 10169
CN Reviparin
CN Sandoparin
CN Sublingula
CN Vetren
CN Vitrum AB
DR 9005-96-1, 11078-24-8, 11129-39-8, 104521-67-1, 67824-73-8, 91444-[illegible]
MF Unspecified
CI PMS, COM, MAN
PCT Manual registration, Polyester, Polyester formed
LC STN Files: ADISNEWS, AGRICOLA, AMABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CENB, CEN, CHEMDATA, CHEMLIST, CIN, CJCHEM, DDFU, DRUGNEWS, DRUGU, EMBAL, IFICDB, IFIPAT, IFUDB, IFA, MEDLINE, MRCK*, MSDS-OH, NAPRALERT, NIOSHTIC, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, TOXCENTER, TOXLIT, USAN, USPATFULL
(*File contains numerically searchable property data
Other Sources: DSL**, EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information

[illegible]

[illegible]

L81 ANSWER 13 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **67-66-3** REGISTRY
CN Methane, compd. with Methyl trichloride (1:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Chloroform, compd. with MeOH (1:1)
MF **C H4 O . C H Cl3**
LC STN Files: CAOLD

CM 1

CRN 67-66-3
CMF C H Cl3

[illegible]

Cl CH Cl

CM 2

CRN 67-56-1
CMF C H4 O

[illegible]

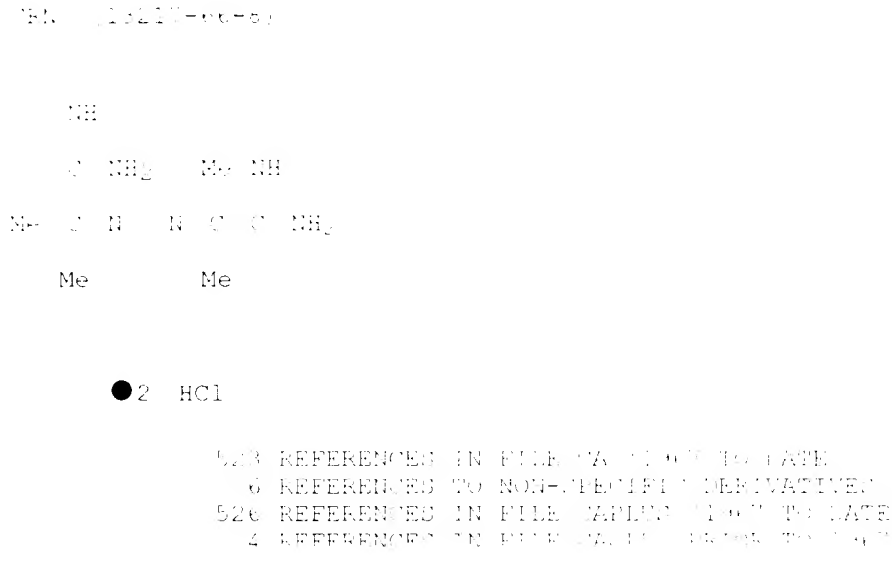
[illegible]

1 REFERENCES IN FILE CAOLD [illegible]

L81 ANSWER 13 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **2997-92-4** REGISTRY
CN Propanimidamide, 2,2'-azobis[2-methyl-, dihydrochloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propionamidine, 2,2'-azobis[2-methyl-, dihydrochloride (8CI, 9CI)
OTHER NAMES:
CN 2,2'-Azobis(2-amidinopropane dihydrochloride
CN 2,2'-Azobis(2-methylpropionamidine) dihydrochloride
CN 2,2'-Azobis[2-(2-imidazolin-2-yl)propane] dihydrochloride
CN 2,2'-Azobis[2-(3,4,5,6-tetrahydropyrimidin-2-yl)propane] dihydrochloride
CN 2,2'-Azobis[2-(5-methyl-2-imidazolin-2-yl)propane] dihydrochloride
CN AAPH
CN Azobis(isobutyramidine) dihydrochloride
CN Azobisisobutyramidinium dichloride
CN Azostarter V 50
CN AZP
CN WAKO V 50
CN WAKO V 50 [illegible]

[illegible]

[illegible]



●2 HCl

REFERENCE 1: 135:[illegible]

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REFERENCE 4: 135:357184

REFERENCE 5: 135:328433

REFERENCE 6: 135:[illegible]

REFERENCE 7: 135:299417

REFERENCE 8: 135:289125

REFERENCE 9: 135:257922

REFERENCE 10: 135:243054

L81 ANSWER 14 OF 18 REGISTRY
[illegible]
[illegible]
C H4 O . 2 C H Cl3

L#1 ANSWER 1 OF 1 REGISTRY COPYRIGHT

RN 521-31-3 REGISTRY

CN 1,4-Phthalazinedione, 5-amino-2,3-dihydro- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 5-Aminophthalhydrazide

CN 5-Aminophthalic acid hydrazide

CN 5-Aminophthalic hydrazide

CN 5-Amino-1,4-dihydroxyphthalazine

CN 5-Amino-2,3-dihydro-1,4-phthalazinedione

CN **Luminol**

FS 3D CONCORD

MF C8 H7 N3 O2

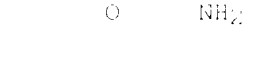
CI COM

LC STN Files: ADISINSIGHT, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMAB, CHEMLIST, CIN, CSCHEM, EMBASE, EMBIOLOGY, ENCOMPPAT, EPFULL, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SYNTHLINE, TOXCENTER, TOXLIT, USPATFULL

**File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

**Enter CHEMLIST File for up-to-date regulatory information



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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REFERENCE 2: [illegible]

REFERENCE 3: [illegible]

REFERENCE 4: [illegible]

L61 ANSWER 1 OF 1 REGISTRY [illegible]

RN 110-82-7 REGISTRY

CN **Cyclohexane (8CI, 9CI)** [OTHER NAMES]

OTHER NAMES:

CN Benzene, hexahydro-

CN Hexahydrobenzene

CN Hexamethylene

CN Hexanaphthene

FS 3D CONCORD

MF C6 H12

CI COM, RPS

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*, DIPPR*, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, IMSDRUGCONF, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TOXLIT, TRCTHERMO*, TULSA, ULIDAT, USPAT2, USPATFULL, VTB

(*File contains numerically searchable property data)

[illegible]

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

20212 REFERENCES IN FILE CA (1967 TO DATE)

424 REFERENCES TO NON-PREFERRED DERIVATIVES IN FILE CA

2228 REFERENCES IN FILE CAPLUS (1967 TO DATE)

19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:380375

REFERENCE 2: 135:377327

REFERENCE 3: [illegible]

REFERENCE 4: [illegible]

REFERENCE 5: [illegible]

REFERENCE 6: [illegible]

REFERENCE 7: [illegible]

REFERENCE 8: [illegible]

[illegible]

67-66-3

[illegible]

Chloroform (8CI)

```
ED   Entered STN
ED   Entered STN: 16 NOV 1984
ED   Trichloroform
CN   Trichloromethane
RN   67-66-3
MF   C H Cl3
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS*, BIOSIS,
       BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU,
       DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,
       ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIDAT, IFIPAT,
       IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PIRA,
       PROMT, RTECS*, SPECINFO, TOXCENTER, USPATFULL, USPAT2, VETU, WPIDS
         (*File contains numerically searchable property data)
     Other Sources:   DOE**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)


    Cl

Cl  CH  Cl


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

           26006 REFERENCES IN FILE CA (1967 TO DATE)
             107 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
           26063 REFERENCES IN FILE CAPLUS (1967 TO DATE)
              18 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE    1:  135:380378

REFERENCE    2:  135:379191

REFERENCE    3:  135:379184

REFERENCE    4:  135:379181

REFERENCE    5:  135:379180

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REFERENCE    7:  135:379178

REFERENCE    8:  135:379177

REFERENCE    9:  135:379176

REFERENCE   10:  135:379175

L1   ANSWER  1  OF  26  CA  COPYRIGHT 2001 ACS on STN
RN   67-66-3
     Max. 10
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[illegible]

[illegible]

STN Files: ... ALUMINUM, ANTIDOTE, ANABASIS, BRILLSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORM, CHEMLIST, CHEMSAFE, CIN, CJACHEM, CSNB, DIPPR, DETHERM*, DISSERT, EMBASE, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFIPAT, IFIUDB, IMSDRUG, IMSPATENTS, IPA, MEDLINE, MERCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TOXLIT, TRCTHERMO*, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

[illegible]

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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1221 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
92078 REFERENCES IN FILE CAPLUS (1967 TO DATE)
20 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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REFERENCE 3: 135:[illegible]

REFERENCE 4: 135:[illegible]

REFERENCE 5: 135:660211

REFERENCE 6: 135:660140

REFERENCE 7: 135:660043

[illegible]

[illegible]

[illegible]

FILE 'HCAPLUS' ENTERED AT [illegible] IN [illegible]
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USA TERMS" FOR DETAILS.
[illegible] ACCEPTANCE HERE AT [illegible]

[illegible]

This file supports REGISTRY [illegible]
all substance data from the REGISTRY file. Enter HELP [illegible]
more information.

HCAplus now provides online access to patents and literature
covered in CA from 1907 to the present. Bibliographic
information and abstracts were added in 2001 for over [illegible]
million records from 1907-1966.

CAS roles have been modified effective December 10, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an [illegible]
the CAS Roles Training [illegible]

=> d 178 all tot

L78 ANSWER 1 OF 22 HCAPLUS COPYRIGHT 2001 ACS
AN 2001:44824 HCAPLUS
DN 134:248181
TI Is the **Oxidation** of **High-Density Lipoprotein Lipids Different** Than the **Oxidation** of **Low-Density Lipoprotein Lipids**?
AU Thomas, Michael J.; Chen, Qairi; Jaouhari, Manal; Anderson, Rachel; Wilson, Martha; Weinberg, Richard; Dorin-Thomas, Mary G.; Kudel, Lawrence J.
CS Departments of Biochemistry Internal Medicine (Gastroenterology) and Pathology/Comparative Medicine, Wake Forest University School of Medicine, Winston-Salem, NC, 27157, USA
SO Biochemistry (2001), 40(6), 1719-1724
CODEN: BICHAW; ISSN: 0006-2960
PB American Chemical Society
DT Journal
LA English
CC 9-5 (General Biochemistry)
AB This article gives detailed insight into the kinetics of **high-d. lipoprotein** (**HDL**) **oxidn.** catalyzed by amidinated-amidinopropane. [illegible] **oxidn.** of **HDL** [illegible] times faster than non-human primate **HDL** [illegible] The **oxidizability** of non-human primate **HDL** [illegible] times lower than the **oxidizability** of human [illegible] Removal of lipophilic **oxidn.**, antioxidants from [illegible] lag in **HDL oxidn.** [illegible] Saturable binding of copper to **HDL** was a [illegible] **copper-catalyzed oxidn.** [illegible] The [illegible] primate **HDL** were 2-fold lower than [illegible] human **HDL**. **Copper-catalyzed oxidn.** of non-human primate **HDL** was slower than that of human **HDL**, [illegible] **oxidized** at [illegible] The [illegible] The **oxidn.** of **HDL** [illegible] LDL, [illegible] **HDL lipids** [illegible] **oxidized** LDL

Lipoproteins
[illegible]
high-d., [illegible] oxidn. [illegible] high-d. lipoprotein lipids

[illegible]

high-d., ; oxidn. : high-
d. lipoprotein lipids
azobis(2-amidinopropane
IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study
high-d., human primate; oxidn.
high-d. lipoprotein lipids
catalyzed by azobis(2-amidinopropane
copper)
IT Autoxidation
Michaelis constant
Oxidation
Oxidizability
Reaction kinetics
(oxidn. of high-d. lipoprotein
lipids catalyzed by azobis(2-amidinopropane) dihydrochlo
ride or by copper
IT **Lipids**, biological studies
Phospholipids, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study
oxidn. of high-d. lipoprotein
lipids catalyzed by azobis(2-amidinopropane) dihydrochlo
ride or by copper)
IT 57-11-4, Stearic acid, biological studies 57-88-5, Cholesterol, esters
60-33-3, Linoleic acid, biological studies 112-80-1, Oleic acid,
biological studies 506-32-1, Arachidonic acid 544-63-8, Myristic acid,
biological studies 544-64-9, Myristoleic acid , oxyde,
biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study
(oxidn. of high-d. lipoprotein
lipids catalyzed by azobis(2-amidinopropane) dihydrochlo
ride or by copper)
IT **2997-92-4** 7440-50-8, Copper, biological studies
RL: BSU (Biological study, unclassified); PRP (Properties
(Biological study); USES (Uses)
(oxidn. of high-d. lipoprotein
lipids catalyzed by azobis(2-amidinopropane) dihydrochlo
ride or by copper)
RE.CNT 66
RE
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L78 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2002 ACS on STN
AN 2000:[illegible] HCAPLUS
DN [illegible]
TI Method and test kit for the determination of [illegible] by oxidative [illegible] protein [illegible] by measuring [illegible]
IN Kirov, [illegible]; Lewin, [illegible]
PA [illegible]
SO PCT Int. Appl., [illegible].
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]

EI [illegible]

RE: [illegible]

[illegible]

[illegible]

AB The invention relates to a **measuring** **kit** for the quant. assessment of the **oxidative** [illegible] of **protein** and the **oxidative** stress in animals and humans, by **measuring** the antioxidative properties of their **protein** -contg. components, such as body fluids or tissues. According to the invention, the samples are examd. in a free-radical generating system after sepn. of low-mol. wt. antioxidants, for example by gel chromatog., and the **measurement** results are compared with those of a sample of identical amino acid compn. but which has not been subjected to **oxidative** stress (std. value). The method for **measuring** the antioxidative activity of **proteins** is based on the fact that some amino acids which have not been modified by **oxidn.** [illegible] have said property as components of **proteins** but [illegible] during **oxidative** stress.

IT **Test kit** fluorometry **oxidative** stress **protein** antioxidative activity

IT UV radiation
(biol. effects; method and **test kit** for **detn.** [illegible] changes caused by **oxidative** stress in **protein** contg. body fluids and tissues by **measuring** antioxidant activity fluorometrically)

IT Mammary gland
(carcinoma; method and **test kit** for **detn.** [illegible] changes caused by **oxidative** stress in **protein** contg. body fluids and tissues by **measuring** antioxidant activity fluorometrically)

IT **Lipoproteins**
RL: ANT (Analyte); ANST (Analytical study)
(low-d.; method and **test kit** for **detn.** of changes caused by **oxidative** stress in **protein** contg. body fluids and tissues by **measuring** antioxidant activity fluorometrically)

IT Animal tissue
Blood analysis
Body fluid
Fluorometry
Gel permeation chromatography
Oxidative [illegible]
Test kits
[illegible] **kit** for **detn.** [illegible] **oxidative** [illegible] **protein** [illegible] by **measuring** [illegible]

IT **Proteins**, [illegible]
RL: ANT (Analyte); [illegible]; ANST (Analytical study); [illegible] Biological study; [illegible]
(method and **test kit** for **detn.** of [illegible] **oxidative** stress in **protein** contg. body fluids and tissues by **measuring** [illegible]

IT [illegible], **analysis**

[illegible]

[illegible]

[illegible]

[illegible] **kit** for **detn.**

[illegible]

[illegible]

RL: ARU (Analytical role, unclassified); BAC (Biological activity or effector, except adverse); ANST (Analytical study; BIOL (Biological study)
(method and test **kit** for **detn.** of diseases caused by **oxidative** stress in **protein** containg. body fluids and tissues by **measuring** antioxidant activity fluorometrically)

IT 50-81-7, L-Ascorbic acid, **analysis** 1406-18-4, Trolox
RL: ARU (Analytical role, unclassified); BAC (Biological activity or effector, except adverse); ANST (Analytical study; BIOL (Biological study)
(method and test **kit** for **detn.** of diseases caused by **oxidative** stress in **protein** containg. body fluids and tissues by **measuring** antioxidant activity fluorometrically)

L78 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:134517 HCAPLUS
DN 132:148749
TI Fluorometric **determination** of **lipid** **oxidizability** in biological systems using diphenylhexatriene
IN Hermetter, Albin; Hofer, Gerald; Lichtenberg, Dov
PA Austria
SO Austrian, 10 pp.
CODEN: AUXXAK
DT Patent
LA German
IC ICM G01N033-92
CC **9-5** (Biochemical Methods)
Section cross-reference(s): 1, 6, 14, 17
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI AT 405693	B	19991025	AT 1994-1678	19940824
AT 9401875	A	19990215		

AB The invention concerns the **detn.** of **lipid** **oxidizability** in biol. systems, e.g. in **lipoproteins**, by using diphenylhexatriene and its **lipid**-derivs. as markers for detecting the progress of **oxidn.** via the decreasing fluorescent signal. The method is used for cells, serum, and body samples to **measuring** the effects of oxidants or antioxidants.
ST **lipid oxidizability** biol material diphenylhexatriene fluorometry
IT **Lipids**, biological studies
Sphingolipids
RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(esters, sorbic, with diphenylhexatriene; fluorometric **detn.** of **lipid oxidizability** in biol. systems using diphenylhexatriene)
IT [illegible]
RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(esters, sorbic, with diphenylhexatriene; fluorometric **detn.** of **lipid oxidizability** in biol. systems using diphenylhexatriene)
IT [illegible]
RL: ARU (Analytical role, unclassified); BAC (Biological activity or effector, except adverse); BIOL (Biological study)

Atherosclerosis

[illegible]
[illegible]
analysis
Heart, [illegible]
[illegible]
Oxidizability
Oxidizing [illegible]
[illegible]
(fluorometric **detn.** of **lipid oxidizability**
in biol. systems using diphenylhexatriene)

IT Albumins, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(fluorometric **detn.** of **lipid oxidizability**
in biol. systems using diphenylhexatriene)

IT [illegible]
[illegible]
[illegible]
Myoglobins
RL: BSU (Biological study, unclassified); [illegible]; BIOL (Biological study); USES (Uses
(fluorometric **detn.** of **lipid oxidizability**
in biol. systems using diphenylhexatriene)

IT **Lipids**, biological studies
Lipoproteins
Sphingolipids
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process)
(fluorometric **detn.** of **lipid oxidizability**
in biol. systems using diphenylhexatriene)

IT **Lipoproteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**high-d.**; fluorometric **detn.** of
lipid oxidizability in biol. systems using
diphenylhexatriene)

IT **Oxidation**
(**lipid**; fluorometric **detn.** of **lipid**
oxidizability in biol. systems using diphenylhexatriene)

IT **Lipoproteins**
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); BIOL (Biological study); PROC (Process)
low-d.; [illegible] **detn.** of
lipid oxidizability [illegible]
[illegible]

IT [illegible]
[illegible]; [illegible] **detn.** of **lipid**
oxidizability [illegible]

IT [illegible]
RL: BSU (Biological study, unclassified); BIOL [illegible]
(reduced; fluorometric **detn.** of **lipid**
oxidizability in biol. systems using diphenylhexatriene)

IT [illegible], diphenylhexatriene [illegible], [illegible]
lipid, [illegible]

in biol. systems using diphenylhexatriene

IT 50-81-7, L-Ascorbic acid, biological studies [illegible], Antioxidants 75-91-2, tert-Butylhydroperoxide 2997-92-4 [illegible], biological studies 7440-50-8, Copper, biological studies [illegible], Hydrogen peroxide, biological studies 7722-84-1, Oxygen, biological studies 9002-17-9, Xanthine oxidase 9029-01-1, Oxygenase, Fe-10028-15-6, Ozone, biological studies [illegible], Cytochrome oxidase 9074-72-6

RL: BSU (Biological study, unclassified); CAT (Catalyst use); BIOL (Biological study); USES (Uses)

(fluorometric detn. of lipid oxidizability in biol. systems using diphenylhexatriene)

L75 ANSWER 4 OF 22 HCAPLUS COPYRIGHT 2006 ACS

AN 2003:8244 HCAPLUS

DN 138:177595

TI **Baseline diene conjugation** in **LDL lipids**: An indicator of circulating **oxidized LDL**

AU **Ahotupa, M.**; Vasankari, T. J.

CS Department of Physiology, MCA Research Laboratory and [illegible], University of Turku, Turku, Finland

SO Free Radical Biol. Med. [illegible], 2003, 34(1), [illegible]

CODEN: FRBMEH; ISSN: 0891-5849

PB Elsevier Science Inc.

DT Journal

LA English

CC **9-5** (Biochemical Methods)

Section cross-reference(s): 14

AB The wide acceptance of the **diene conjugation**-method in monitoring **low-d. lipoprotein** (**LDL**) **oxidn.** ex vivo has led to development of an assay, which **measures** the amt. of **baseline diene conjugation** (BDC) in circulating **LDL**, and is an indicator of **oxidized LDL** in vivo. The **LDL**-BDC assay is based on pptn. of serum **LDL** with buffered **heparin**, and **spectrophotometric detn.** of **baseline** level of **conjugated dienes** in **lipids** extd. from **LDL**. Compared to existing methods for **oxidized LDL**, **LDL**-BDC [illegible] perform. Chem. studies by HPLC and UV-vis spectroscopy show that **LDL**-BDC is a specific measure of **oxidized LDL**. Validity of the assay in further biol. studies is [illegible] correlation with the [illegible] of **oxidized LDL**. This [illegible] **LDL**-BDC [illegible] related to **coronary**, [illegible] **atherosclerosis**. [illegible] [illegible] **LDL**-BDC [illegible] **atherosclerosis** [illegible], hypertension, diabetes, and [illegible] seem to indicate that [illegible] **atherosclerosis**. **LDL**-BDC [illegible] specificity [illegible] **lipid** [illegible] **atherosclerosis**. [illegible] **LDL** [illegible] **LDL oxidn.** [illegible] **atherosclerosis**

[illegible]

Spectroscopy

LDL baseline diene conjugation

[illegible] **oxidized LDL**

LDL)
IT Conjugation [illegible]
(diene; LDL-baseline diene
conjugation assay for circulating oxidized
LDL
IT Lipoproteins
PL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study)
(low-d., oxidized; LDL-
baseline diene conjugation assay for
circulating oxidized LDL)
IT Lipoproteins
PL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(low-d.; LDL-baseline
diene conjugation assay for circulating
oxidized LDL)
RE.CNT 67
RE
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[illegible]

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L16 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:130575 HCAPLUS
DN 130:165162
TI Method for quantifying **oxidation** parameters of **low density lipoproteins** and diagnostic uses
IN **Ahotupa, Markku**
PA **Oy Aboatech AB, Finland**
SO U.S., 15 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G01N021-76
ICS G01N033-92
NCL 436071000
CC **9-9** (Biochemical Methods)
Section cross-reference(s): 6, 13, 14
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5874313	A	1999 02	US 1997-[illegible]	1997 [illegible]

AB A method for the detn. of the **oxidizability** of **low d. lipoproteins** (**LDL**) in a sample of plasma comprises incubating a hydrophobic, water insoluble polymeric material with the plasma sample to bind the **LDL** to the polymeric material, isolating the **LDL** bound to the polymeric material, extracting the **lipids** from the **LDL** bound to the polymeric material, and measuring the **conjugated dienes** in the extracted **lipid** fraction. The method is particularly useful for the **screening** of patients for **atherosclerosis** and **coronary heart** disease.

IT [illegible] : **low density lipoprotein oxidn**
conjugated diene: atherosclerosis

lipoprotein oxidn conjugated diene

IT **Atherosclerosis**
Coronary artery [illegible]
[illegible] **oxidn.** [illegible]
[illegible] **low d. lipoproteins** [illegible]
[illegible]
IT **Conjugated dienes**
BL: BOC (Biological occurrence); BIB [illegible]; PUR (Purification or recovery); BIOL (Biological study); [illegible]; PREP (Preparation); PROC (Process)
(**lipids**; method for quantifying **oxidn.** parameters of **low d. lipoproteins** and diagnostic uses)
IT Aliphatic alcohols
BL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(lower; method for quantifying **oxidn.** [illegible] **low d. lipoproteins** and [illegible]
IT Antioxidants
Blood
Blood analysis
Chemiluminescence
Chemiluminescence spectroscopy
Diabetes mellitus
Diagnosis
Extraction
Mammal (Mammalia)
Obesity
Oxidation (biological)
Oxidative stress (biological)
Peroxidation
Plasma (blood)
Precipitation (chemical)
Serum (blood)
Spectrophotometry
(method for quantifying **oxidn.** parameters of **low d. lipoproteins** and diagnostic uses)
IT Chloro alkanes
BL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for quantifying **oxidn.** [illegible] of **low d. lipoproteins** and [illegible]
[illegible]
BL: [illegible]; BIB [illegible]; PUR [illegible]; [illegible]
[illegible]; [illegible]; [illegible]
[illegible] **oxidn.** [illegible] **low d. lipoproteins** [illegible]
IT Blood triglycerides
BL: BOC (Biological occurrence); BIB (Biological process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(method for quantifying **oxidn.** [illegible] **low d. lipoproteins** and [illegible]
[illegible]
BL: [illegible]; BIB [illegible]

[illegible]
Low density lipoproteins
[illegible]
[illegible]

IT **Lipids**, biological studies
RL: BOC (Biological occurrence); BSU (Biological use, unclassified); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process)
(unstd.; method for quantifying **oxidn.** parameters of **low d. lipoproteins** and diagnostic uses)

IT **67-56-1**, **Methanol**, analysis **67-66-3**, **Chloroform**, analysis **110-82-7**, **Cyclohexane**, analysis **9005-49-6**, **Heparin**, analysis
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for quantifying **oxidn.** parameters of **low d. lipoproteins** and diagnostic uses)

IT **2997-92-4**
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for quantifying **oxidn.** parameters of **low d. lipoproteins** and diagnostic uses)

IT 57-88-5, Cholesterol, biological studies [illegible], alpha.-Tocopherol, 5677-56-4, Ubiquinol-10
RL: BOC (Biological occurrence); BPR (Biological process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(method for quantifying **oxidn.** parameters of **low d. lipoproteins** and diagnostic uses)

IT 7727-37-9, Nitrogen, biological studies
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)
(method for quantifying **oxidn.** parameters of **low d. lipoproteins** and diagnostic uses)

RE.CNT 7
RE
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[illegible] ANSWER [illegible] HEALTH [illegible]
AU [illegible]
TI [illegible]
IT **Measurement** of **oxidizability** [illegible]
AU Koivusk, Anneli; Peltonen-L, Virpi
CS Medical Clinic, University H[illegible], Helsinki, [illegible], Finland
SO Methods Enzymol. 1994, [illegible] (Oxidants Antioxidants, Part A), 1-[illegible]
CODEN: MENZAS; ISSN: [illegible]
DT [illegible]
LA [illegible]

lipoprotein oxidn.
measure [illegible] **oxidn.**
lipoprotein oxidizability measurement

oxidn. assay, [illegible] effect of hydrophilic antioxidants in **lipoprotein oxidn**. and characterizing the **oxidizability** of plasma **lipoproteins**, and [illegible] such as fast and simple sample [illegible] required, and avoidance of artifactual **oxidn.** during **lipoprotein isolation.** We propose that the **measurement** of plasma **oxidizability** at 234 nm is an adequate **screening** method in characterizing the **oxidizability** of plasma **lipoproteins.** (c) 1999 Academic Press.

ST **oxidizability** blood plasma uv vis **spectroscopy**

IT Antioxidants
Blood analysis
Oxidation (biological)
Oxidizability
Plasma (blood)
UV and visible **spectroscopy**
(**measurement** of **oxidizability** : blood plasma)

IT **Lipoproteins**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**measurement** of **oxidizability** of blood plasma)

IT **2997-92-4**, AAPH 7758-98-7, Copper sulfate, biological studies
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(oxidant; **measurement** of **oxidizability** of blood plasma)

IT 9029-60-1, Oxygenase, lip-
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(soybean; **measurement** of **oxidizability** of blood plasma)

RE.CNT 31

RE

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(7) Frei, B; J Lipid Res 1994, V35, P[illegible] HCAPLUS
(8) Frei, B; [illegible]
(9) [illegible]
(10) [illegible]
(11) [illegible]
(12) [illegible]
(13) [illegible]
(14) Kontush, A; Free Radic Res 1996, V24, P[illegible] HCAPLUS
(15) Kontush, A; J Biol Chem 1996, V271, P[illegible] HCAPLUS
(16) Kontush, A; J Lipid Res 1996, V37, P[illegible] HCAPLUS
(17) Ma, Y; Proc Soc Exp Biol Med 1994, V205, P[illegible] HCAPLUS
(18) M[illegible]; Arterioscler Thromb 1994, V14, P[illegible] HCAPLUS
(19) [illegible]

L7 ANSWER [illegible] OF 22 HCAPLUS COPYRIGHT [illegible] ACS
AN 1998:4[illegible]018 HCAPLUS
DN 129:21[illegible]794
TI **Baseline diene conjugation** in **LDL lipids** as a direct **measure** of in vivo **LDL oxidation**

AU **Ahotupa, Markku**; Marniemi, Jukka; Lehtimaki, [illegible]; [illegible], Kati; Raitakari, Olli T.; Vasankari, Tommi; Viikari, Jorma; [illegible], [illegible]; Yla-Herttuala, Seppo
CS MCA Research Laboratory, Department of Physiology, University of Turku, Turku, FIN-205[illegible], Finland

SO Clin. Biochem. (1998), 31(4), [illegible]
CODEN: CLBIAS; ISSN: 0009-9120
PB Elsevier Science Inc.
DT Journal
LA English
CC **9-16** (Biochemical Methods)
Section cross-reference(s): 14

AB The aim of the study was to establ. test validity of the [illegible] method (**LDL baseline diene conjugation**, LDL-BDC) for **detn.** of circulating **oxidized LDL**. A detailed comparison between the ultracentrifugation and **heparin** pptn. methods for **LDL isolation** was performed to test suitability of the [illegible] pptn. method. Validity of **LDL**-BDC as an indicator of [illegible] **oxidized LDL** was tested by comparing **LDL**-BDC to results obtained by the immunol. autoantibody method. [illegible] **LDL isolated** by **heparin** pptn. did not differ from those **isolated** by sequential ultracentrifugation. While highest amt. of **diene conjugation** was found in **LDL** (40 of that in serum), substantial amts. were also found in **VLDL** (31) and **HDL** (25). When **analyzed** in the same samples, assays for the titer of autoantibodies against **oxidized LDL** and **LDL**-BDC were found to show good correlation (r = [illegible].5[illegible], p [illegible] 0.001, n = [illegible]). These results, together with thus far conducted studies on clin. applicability of the method, indicate that **LDL**-BDC is a promising candidate in [illegible] method for estn. of **LDL oxidn.** in vivo.

ST **diene conjugation LDL lipid oxidn** atherogenesis; blood **lipid heparin** pptn ultracentrifugation

IT **Atherosclerosis**
Blood analysis
[illegible]
[illegible]
[illegible]
baseline diene conjugation in
LDL lipids as a direct **measure** [illegible]
LDL oxidn.

IT Blood **lipids**
High-density lipoproteins
Oxidized low-density lipoproteins
Very low-density lipoproteins

[illegible], Heparin, [illegible]

[illegible]

AN [illegible]
TI Spectrophotometric determination of oxidized low-density lipoprotein
AU [illegible]
CS I. Ustav Lekarske Chemie Biochemie, Charles University, [illegible], Prague, Czech Rep.
SO Klin. Biochem. Metab. (1995), 3(2), 72-[illegible]
CODEN: KBMEFQ; ISSN: 1210-7921
PB Ceska Lekarska Spolecnost J. Ev. Purkyne
DT Journal
LA Czech
CC 9-5 (Biochemical Methods)
AB Oxidn. of low-d. lipoproteins (LDL) in oxidative stress is involved in many human diseases, e.g. atherosclerosis, hypertension, and [illegible]. Oxidatively modified LDL [illegible] cytotoxic particles with chemotactic effect on monocytes and [illegible] cells. LDL oxidn. can be assessed by [illegible] oxidized LDL, antibody levels against oxLDL, formation of conjugated dienes, and changed lag phase in isolated LDL particles. A simple spectrophotometric detn. of oxLDL is presented. The detn. of oxLDL can be done in blood serum samples sepd. at collection and stored at -20 or -80.degree.C for 1 mo. Under these storage conditions, the oxLDL concns. in samples do not change significantly. The optimal sample size is 800-1000 .mu.L serum. Serum (1 mL) is mixed with 7 mL pptn. soln. (0.064 M Na citrate plus 5% (v/v) heparin/L, pH 5.05) at 4.degree.C and centrifuged. The pellet is resuspended in 1 mL 0.1 M Na phosphate buffer [illegible] and 0.1 mL of the suspension is extd. with 1.5 mL chloroform-methanol (2:1). The org. layer is evapd. under air stream, dissolved in cyclohexane, and its absorbance is measured at 234 nm; the oxLDL concn. is then calcd. using a formula. The addn. of EDTA as anticxidant to the samples can raise the oxLDL concns. due to prooxidative effects of the Fe-EDTA complex. It is convenient to leave the upper aq. layer with hydrophilic antioxidants over the org. layer during the evapn. under air. The oxLDL concn. in a control group of [illegible] donors was 44.0 +/- 11.6 .mu.mol/L and the coeff. of variation of the method was 12.1 %. The method is fast, simple, cheap, time saving, and allows measurements of large no. of samples. The [illegible] precision method with [illegible] photometer [illegible].
IT blood analysis oxidized lipoprotein
spectrophotometry
Blood analysis
[illegible] spectroscopy
(oxidized low-d. lipoprotein spectrophotometric detn. in human blood serum)
IT Oxidized low-density lipoproteins
RL: ANT (Analyte); ANST (Analytical study)
(oxidized low-d. lipoprotein spectrophotometric detn.)

[illegible]

low density lipoprotein
atherosclerotic [illegible]

CODEN: [illegible]; ISSN: [illegible]

PB Lipid Research, Inc.

DT Journal

LA English

CC 14-5 Mammalian hormones

Section cross-reference(s): 9

AB Hydroperoxycholesterols (OOHs) are intermediates in cholesterol **oxidn.** and potential cytotoxins. A normal-phase HPLC method with UV (205 nm) detection was developed that could resolve cholest-5-ene-3.beta.,7.beta.-diol, 7.beta.-OOH, 7-ketocholesterol (7K), and the epimeric 7-hydroxycholesterols (7OHs). Hydroperoxycholesterol formation was **investigated** when **LDL** was exposed to four different **oxidizing** systems: Cu^{2+}; Ham's F-10; mouse peritoneal macrophages in Ham's F-10; and a metal-independent peroxyl-radical generating system (AAPH). With all 4 **oxidizing** systems, 7OOH (both free and esterified, mostly as the .beta.-isomer) was the major oxysterol formed at early times, with 7K dominating at later stages (.gtoreq.24 h, in Cu-oxLDL. When **LDL** was **oxidized** in the presence of cells there was transfer of free oxysterols from **LDL** to the cells. Negligible 7OOH, but significant amts. of 7OH, accumulated in the cells primarily within cellular free 7OOH. **Lipid** extds. of aortic plaque samples obtained from patients undergoing carotid endarterectomy were **analyzed**. Only trace amts. of 7OOH (< 1% of total cholesterol) could be detected using this normal-phase HPLC method with UV detection, with a more sensitive reverse-phase method (<0.1%) **chemiluminescence** detection. Ketone (7K) was the most abundant 7-oxygenated sterol detected, at least 2-fold in excess of that found for 7OOH, followed by 7.beta.OH and 7.alpha.OH. Trace 7OOH in plaque indicate its lability in biol./cellular systems and may signify the ability of cells in the artery wall to metabolize it further.

ST hydroperoxycholesterol **oxidized LDL lipoprotein atherosclerosis**

IT **Atherosclerosis**

HPLC

Peritoneal macrophage

(7-hydroperoxycholesterol and its deriv. products in **oxidized LDL lipoprotein** and human **atherosclerotic** plaques)

IT **Oxidized low-density lipoproteins**

RL: PRP (Properties)

(7-hydroperoxycholesterol and its deriv. products in **oxidized LDL lipoprotein** and human **atherosclerotic** plaques)

IT [illegible]

(Ham's F-10; 7-hydroperoxy[illegible] in **oxidized LDL lipoprotein** [illegible] **atherosclerotic** [illegible]

[illegible]

RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study)

[illegible] **oxidized LDL lipoprotein** [illegible] **atherosclerotic** plaque

[illegible], [illegible], **oxidized** [illegible]

[illegible] **oxidized LDL lipoprotein** [illegible] **atherosclerotic** [illegible]

[illegible] oxidized
LDL lipoprotein [illegible] **atherosclerotic**
[illegible]

L[illegible] ANSWER 10 OF [illegible] HCAPLUS [illegible]
AN 1997:518549 HCAPLUS
DN 127:231539
TI Suitability of chemical in vitro models to **investigate**
LDL oxidation: study with different initiating
conditions in native and .alpha.-tocopherol-supplemented **LDL**
AU Seccia, Milfred; Albano, Emanuele; Bellomo, Giorgio
CS Dep. Medical Sciences, 2nd Fac. Medicine, Univ. Torino, Novara, I-28100,
Italy
SO Clin. Chem. (Washington, D. C.) [illegible], [illegible], [illegible]
CODEN: CLCHAJ; ISSN: 0009-9147
PB American Association for Clinical Chemistry
DT Journal
LA English
CC **9-16** (Biochemical Methods)
Section cross-reference(s): 6, 14
AB **Isolated** human **LDL**, used in the native form or
supplemented with .alpha.-tocopherol (.alpha.T), were **oxidized**
with Cu2+, 2,2'-azobis-(2-amidino propane) hydrochloride (AAPH), and Cu2+
plus horseradish peroxidase (HRP). The **oxidn.** kinetics were
measured spectrophotometrically at 234 nm to follow the
formation of **conjugated dienes** and evaluated as
resistance to **oxidn.** lag phase, LP) and maximal **oxidn**
. rate (propagation rate, PR). The duration of LP in nonsupplemented
LDL was different with the three prooxidant stimuli (LP, in min:
96.+-.19 for Cu2+, 28.7.+-.6.7 for HRP, and 67.1.+-.11.2 for AAPH). No
correlation was found between the values obtained with Cu2+ and AAPH or
HRP, but a significant correlation was found with AAPH and HRP (r =
0.798). In vitro .alpha.T supplementation prolonged the LP and decreased
the PR with all the stimuli. The extent of increase in LP was highly
correlated (r = 0.672, for Cu2+ and HRP; r = 0.605, for Cu2+ and AAPH; r =
0.749, for AAPH and HRP). Although the evaluation of ex vivo **LDL**
oxidn. is dependent on the prooxidant stimulus, the three
prooxidant conditions used detect equally well the antioxidant
supplementation in preventing **LDL oxidn.**
KW **lipoprotein low density oxidn**
tocopherol oxidant
IT Blood
Blood analysis
Oxidation
Oxidizing
[illegible] **investigate** [illegible] **LDL**
oxidn.
IT **Low-density lipoproteins**
RL: ANT (Analyte); BPR (Biological process); PRP (Properties); ANST
(Analytical study); BIOL (Biological study); PROC (Process)
(chem. in vitro models to **investigate** human **LDL**
oxidn.
IT **Oxidized low-density lipoproteins**
RL: ANT (Analyte); BPR (Biological process); PRP (Properties); ANST (Analytical study); BIOL (Biological study); PROC (Process)
[illegible]

[illegible] **investigate** [illegible] **LDL**
oxidn.
2007-92 ;

(chem. in vitro models; investigate human LDL oxidn.)

L7- ANSWER 11 OF 12 HCAPLUS COPYRIGHT [illegible] ACS
AN [illegible]:[illegible] HCAPLUS
DN [illegible]:[illegible]
TI **Spectrophotometric** assay for total peroxyl radical trapping antioxidant potential in human serum
AU Valkonen, Mila; Kuusi, Timo
CS Department of Medicine, University of Helsinki, Helsinki, [illegible], Finland
SO J. Lipid Res. (1997), 38(4), [illegible]
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
CC **9-5** (Biochemical Methods)
AB Antioxidants prevent modification of **low d. lipoprotein** (**LDL**) by free radicals and possibly also atheroma formation. The capacity of human serum to protect against peroxyl radicals is **measured** by the total peroxyl radical-trapping potential (TRAP). Its **measurement** has thus far required equipment not available in many clin. labs., such as a thermostatted oxygen electrode cell or a luminometer. To develop a simple method using a free radical probe, dichlorofluorescin-diacetate (DCFH-DA), previously used before in studies of respiratory burst in inflammatory cells, for **oxidn.** by radicals from thermal decomp. of 2,2'-azobis(2-amidinopropane)dihydrochloride (AAPH) converts this compd. to highly fluorescent dichlorofluorescein (DCF). The DCF also has absorbance at 504 nm thus enabling the **detn.** of TRAP either fluorimetrically or **spectrophotometrically.** Increasing the concn. of AAPH enables the **measurement** of DCF formation and its inhibition by serum samples at room temp. The intra-and interassay coeffs. of variation of this assay are 3.4% and 4.6%, resp. The mean value for serum TRAP of healthy subjects is 1155 .mu.mol/l. The TRAP in human serum can be increased by adding various antioxidant substances to the assay in vitro or by dietary supplementation of healthy subjects with vitamin E in vivo. An increase was also found in serum vitamin E levels and in the ability of the human **LDL** is able to resist **oxidn.** Thus the **detn.** of TRAP by this method, which requires only com. available chems., can be used for the evaluation of phenomena assocd. with **lipid** accumulation in human artery wall.
IT **spectrophotometric** assay (for peroxyl radical trapping; for blood serum)
[illegible]
IT [illegible]
Blood analysis
(**spectrophotometric** assay for peroxyl radical trapping antioxidant potential in human **serum**
IT Artery
[illegible]
Spectrophotometry
[illegible]
spectrophotometric [illegible]
[illegible]

spectrophotometric [illegible]

IT [illegible], Vitamin E [illegible], [illegible]
RL: ANT (Analyte); ANST (Analytical study)
spectrophotometric [illegible]
IT [illegible] 2997-92-4, [illegible]
RL: ARG (Analytical reagent use); ANST (Analytical study); [illegible]
spectrophotometric assay for total peroxyl radical trapping antioxidant potential in human serum)

L78 ANSWER 12 OF 22 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:225520 HCAPLUS
DN 126:30547
TI Initiation of **LDL oxidation** by copper ions or AAPH yields different kinetic parameters which are correlated
AU Lehmann, M.; Pedersen, B.; Kristensen, M.
CS Inst. Ernährungswiss., Christian-Albrechts-Univ., Kiel, Germany
SO Clin. Chim. Acta (1997), 262(1,2), 147-157
CODEN: CCAAAR; ISSN: 0009-8981
PB Elsevier
DT Journal
LA English
CC **9-16** (Biochemical Methods)
AB The authors followed the prodn. of **conjugated dienes** in the presence of CuSO4 or AAPH in identical samples (204 .mu.mol/L **LDL** cholesterol) simultaneously. They found significant correlation coeffts. between the results of both tests while the abs. values were different.
ST **LDL oxidn** copper AAPH kinetics
IT **Oxidation**
initiation of **LDL oxidn.** by copper ions or AAPH yields different kinetic parameters which are correlated
IT **Low-density lipoproteins**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
initiation of **LDL oxidn.** by copper ions or AAPH yields different kinetic parameters which are correlated
IT **2997-92-4** 7758-98-7, Copper sulfate (CuSO4), uses
RL: NUU (Other use, unclassified); USES (Uses)
initiation of **LDL oxidn.** by copper ions or AAPH yields different kinetic parameters which are correlated

[illegible]
AN [illegible]
DN [illegible]
TI [illegible] **oxidation** [illegible]
[illegible] : **low density lipoproteins**
AU **Ahotupa, Markku**; Kuutu, Merja; Mäntylä, Eva
CS MCA Research Laboratory, University of Turku, Turku, Finland
SO Clin. Biochem. (1996), 29(2), 139-44
CODEN: CLBIAS; ISSN: 0009-9120
DT Journal
LA English
CC **6-1** [illegible]

[illegible]
LDL [illegible] detn.
baseline [illegible] : conjugated dienes
lipids [illegible] LDL. [illegible]
[illegible]

[illegible]

LDL-BDC, the CV was 4.4 and 6.7 for within- and between-assay precision, resp. For the **LDL**-TRAP, the CV was 7.1 and 8.7 for within- and between-assay precision, resp. Pravastatin (40 mg/day for 2 wk) did not affect **LDL**-BDC or **LDL**-TRAP levels. A significant correlation was found between the **LDL**-BDC and **LDL**-TRAP values. **LDL**-BDC and **LDL**-TRAP values were at the same level in both sexes. The **LDL**-BDC was found to increase with age. Smoking significantly increased **LDL**-TRAP substantially, but did not affect the **LDL**-BDC level. Conclusions: These methods are fast and simple to perform, and can, therefore, be applied to clin. purposes.

ST **oxidn** product antioxidant **LDL lipoprotein**

IT Antioxidants
Blood analysis
Senescence
(simple methods of quantifying **oxidn.** products and antioxidant potential of **low d. lipoproteins**)

IT **Lipoproteins**
RL: ANT (Analyte); ANST (Analytical study)
(**low-d.**, simple methods of quantifying **oxidn.** products and antioxidant potential of **low d. lipoproteins**)

L76 ANSWER 14 OF 22 HCAPLUS COPYRIGHT 2001 ACS
AN 1995:966113 HCAPLUS
DN 124:23179
TI Direct **measurement** by single photon counting of **lipid** hydroperoxides in human plasma and **lipoproteins**
AU Zamburlini, Adriana; Maiorino, Matilde; Barbera, Pierro; Roveri, Antonella; Ursini, Fulvio
CS Dep. Biol. Chem., Univ. Padua, Padua, 35121, Italy
SO Anal. Biochem. (1995), 232(1), 107-13
CODEN: ANBCA2; ISSN: 0003-2697
DT Journal
LA English
CC **9-16** (Biochemical Methods)
AB A single photon counting procedure for **measuring lipid** hydroperoxides in human plasma or **LDL**-VLDL, separated from extn. and chromatog., is described. This appears to be a potential procedure because the recovery of phospholipid hydroperoxides from plasma is a crit. point which, in the hands, was limiting. The assay is based on luminol, 2,3-dihydro-1,4-phthalazinedione, and its enhancement by 6-(4-hydroxyphenyl)-2-methylimidazo[1,2-a]pyrazin-3(7H)-one. The **measurement** of "basal" chemiluminescence was also considered. The assay was validated with **isolated** human **lipoproteins** **LDL**-VLDL **isolated** by heparin-Sepharose affinity chromatog. The content of **lipid** hydroperoxides was found to be similar to that obtained by other methods. The procedure, which is simple and rapid, can be applied to routine clin. studies.

lipoproteins.
lipid
LDL

Blood analysis

IT [illegible]
[illegible] measurement [illegible]
lipid [illegible] **lipoproteins**

IT **Lipoproteins**
RL: AMX (Analytical matrix); ANST (Analytical study)
(direct **measurement** by single photon counting of
lipid hydroperoxides in human plasma and **lipoproteins**
)

IT **Lipids, analysis**
RL: ANT (Analyte); ANST (Analytical study)
(hydroperoxides, direct **measurement** by single photon counting
of **lipid** hydroperoxides in human plasma and
lipoproteins)

L[illegible] ANSWER [illegible] [illegible] COPYRIGHT [illegible] ACS
AN [illegible]
DN [illegible]
TI Assay of **low-density lipoprotein**
susceptibility to **oxidation** by means of the [illegible]
generator AAPH
AU Biffanti, Susanna; Bonanome, Andrea; Malaring, Matilde; Trevisi, Fabio; Pagnan, Antonio
CS Department of Internal Medicine, University of Padua, Padua, Italy
SO Nutr., Metab. Cardiovasc. Dis. (1994), 4(3), 137-41
CODEN: NMCDEE; ISSN: 0939-4753
DT Journal
LA English
CC **9-16** (Biochemical Methods)
AB **Oxidative** modification of **low-d.**
lipoproteins (**LDL**) increases their atherogenic
properties. The susceptibility of **LDL** particles to
oxidn. is influenced both by their antioxidant content and by
their fatty acid pattern. Several biochem. methods have been employed to
study **LDL oxidn.** In this paper we describe a method
for evaluating the susceptibility of **LDL** to **oxidative**
modification. **LDL isolated** from plasma of healthy
male volunteers was **oxidized** in vitro by means of
2,2'-azobis(2-amidinopropane) dihydrochloride (AAPH), a free radical
initiator. The **oxidative** reaction was followed by continuous
monitoring of the rate of oxygen consumption. The diene [illegible] oxygen
consumption was divided into two consecutive phases, that is an [illegible]
[illegible] "[illegible]" [illegible]
"[illegible]" [illegible]
[illegible] anal. [illegible] **LDL** [illegible] analyzed
[illegible]
LDL [illegible], [illegible], [illegible], [illegible]
antioxidant in protecting **LDL** from **oxidn.** The
peroxidn. rate was influenced by the fatty acid [illegible] **LDL**,
increasing when the content of linoleic acid was higher [illegible],
[illegible], [illegible]. These results indicate that the test with AAPH [illegible]
[illegible] the susceptibility of **LDL** to **oxidative**
[illegible]
IT **oxidn** low density lipoprotein

generator AAPH)

IT **Lipoproteins**
RL: RCT (Reactant)
(**low-d.**, assay of **low-d.** **lipoprotein** susceptibility to **oxidn.** by means of the free radical generator AAPH

IT 60-33-3, Linoleic acid, Biological studies 14484-64-1, Vitamin E
RL: BOC (Biological occurrence); PROC (Process); OCCU (Occurrence)
(assay of **low-d. lipoprotein** susceptibility to **oxidn.** by means of the free radical generator AAPH)

IT **2997-92-4**, 2,2'-Azobis(2-amidinopropane) dihydrochloride
RL: RCT (Reactant)
(assay of **low-d. lipoprotein** susceptibility to **oxidn.** by means of the free radical generator AAPH)

L78 ANSWER 16 OF 22 HCAPLUS COPYRIGHT 2001 ACS
AN 1994:[illegible] HCAPLUS
DN 120:27010
TI Method for delipidation of lyophilized **lipoproteins** of **high density** from human blood serum
IN Sizaltov, Aleksandr P.
PA USSR
SO U.S.S.R.
From: Izobreteniya 1992, (28), 243.
CODEN: URXXAF
DT Patent
LA Russian
IC ICM C07K015-16
CC **9-9** (Biochemical Methods)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1752167	A3	1992[illegible]	SU 1990-4[illegible]	19[illegible]

AB Lyophilized **high-d. lipoproteins** from human serum are delipidated by extn. with a **chloroform-methanol** mixt. followed by extn. with Et2O. The mixt., in 25-60 vol. **methanol** and is used at 100-300 mL per 1-2 g lyophilized **lipoprotein**; the **lipoproteins** are then extd. twice with six vols. of Et2O. Extns. are carried out for 1-45 min at -1 to +4.[illegible] The **high density lipoprotein** [illegible]; **lipid** with **high density lipoprotein**

IT **Lipids**, [illegible]
RL: [illegible]
(removal from lyophilized **high-d. lipoproteins**, by [illegible])

IT **Lipoproteins**
RL: ANT (Analyte); ANST (Analytical study)
high-d., [illegible]

[illegible] analysis 30307-22-0

[illegible]

Mario; Garbin, Tiziana; Lan L., Anna; Iacobelli, Aldo; Lapenna, Vittorio
CS Inst. di Semeiot. e Metodol. Med., Univ. di Bari, Bari, Italy
SO Biochim. Biophys. Acta (1994), 1211(3), 353-60
CODEN: BBACAQ; ISSN:
DT Journal
LA English
CC **9-3** (Biochemical Methods)
Section cross-reference(s): 15
AB **Lipid** hydroperoxides are implicated in the pathogenesis of **atherosclerosis.** This work was therefore set up to obtain a fast and specific **chemiluminescent** assay for **measuring** hydroperoxides in native **low-d. lipoprotein** (**LDL**). The app. was a complete HPLC system including pumps, an autosampler, a computer, and a **chemiluminescent** detector with a T-mixing coil in the place of the column. Samples were injected by the autosampler and mixed with **luminescent** reagent (1.0 mM **luminol** and 1.0 mM microperoxidase in 0.1 M tris buffer, pH 10.0) in the T-piece. To generate a calibration curve, linoleic acid hydroperoxide was obtained by incubating soybean lipoxygenase with linoleic acid. The calcd. **conjugated diene** value was in good agreement with the nominal linoleic acid hydroperoxide value. The **chemiluminescence** was linear with the amt. of linoleic acid hydroperoxide injected and the detection limit was about 5 pmol linoleic acid hydroperoxide. The **chemiluminescence** induced by copper-**oxidized LDL** was linear with concn.; the detection limit, when compared with linoleic acid hydroperoxide, was similar. The reproducibility of the linoleic acid hydroperoxide and of **oxidized LDL** hydroperoxide was examd. in single pools. The coeff. of variation on the triplicates of each pool was about 5%. The titer of the linoleic acid hydroperoxide and **oxidized LDL** peroxides was quite stable for at least 10 days when stored under Ar at 4.degree. in the presence of EDTA. The mean value of the **LDL** hydroperoxides in 16 control subjects was 145.20 +-. 96.81 pmol/mg **LDL protein.** This microperoxidase-**luminol**-dependent **chemiluminescence** flow-injection assay is a rapid, sensitive, and selective method for **measuring lipid** hydroperoxides in native **LDL.**
ST blood **lipoprotein lipid** hydroperoxide **detn;** **chemiluminescence lipid** hydroperoxide **detn;** HPLC **lipid** hydroperoxide **detn;** flow chromatog **lipid** hydroperoxide **detn;** flow injection **lipid** hydroperoxide **detn**
IT Blood analysis
lipid hydroperoxide detn. in low-d. lipoproteins of human blood, by chemiluminescent flow-injection assay
IT Spectrochemical analysis
chemiluminescence, in lipid hydroperoxide detn. in **low-d. lipoproteins** of human **blood**
IT Chromatography, column and liquid
high-performance, **lipid** hydroperoxide detn. by, **chemiluminescence** detection
IT Lipids, blood
low d., lipid hydroperoxide detn. by chemiluminescent

assay).

L[illegible] ANSWER [illegible] OF 12 HCAPLUS COPYRIGHT [illegible] ACS
AN [illegible] HCAPLUS
DN [illegible]
TI Pre-beta **high-density lipoprotein** **determined** by immunoblotting with **chemiluminescent** detection
AU [illegible]'Kane, Maurice J.; [illegible], B. Brian; [illegible], John; [illegible], Mary M.; Trimble, Elisabeth R.
CS Dep. Clin. Biochem., R. Victoria Hosp., Belfast, [illegible], UK
SO Clin. Chem. (Washington, D. C.) (1992), [illegible], [illegible]
CODEN: CLCHAU; ISSN: 0009-9147
DT Journal
LA English
CC **9-10** (Biochemical Methods)
Section cross-reference(s): [illegible]
AB A novel assay is described of pre-beta **high-d.** **lipoprotein** (**HDL**), a unique **apolipoprotein** A-I (apo A-I)-contg. **lipoprotein** particle. The pre-beta and alpha **lipoproteins** are sepd. by electrophoresis in agarose and transferred onto a membrane by capillary blotting. The membrane is sequentially incubated with sheep anti-human apo A-I antiserum and then with a conjugate of rabbit anti-sheep immunoglobulin and horseradish peroxidase. **Chemiluminescence** formed by the peroxidase-catalyzed **oxidn.** of **luminol** in the presence of an enhancer is captured on photog. film, and the pre-beta **HDL** band is quantified by transmission densitometry. The assay is calibrated with stds. prepd. from a ref. serum dild. in 9 mol/L urea. Within-batch precision (CV) at pre-beta **HDL** concns. of 22.1 and 44.3 mg/L was 7% and 4.3% resp. Pre-beta **HDL** contained 1.6% (0.65-2.6%, median and range) of total serum apo A-I in 30 normolipidemic subjects.
ST Serum prebeta **high density lipoprotein** **detn**; immunoblotting prebeta **lipoprotein detn**; **chemiluminescence** prebeta **lipoprotein detn**
IT **Blood analysis**
(pre-.beta.-**high-d. lipoprotein** **detn.** in human, by immunoblotting and **chemiluminescence** detection)
IT **Lipoproteins**
RL: ANT (Analyte); ANST (Analytical study)
(**high-d.** pre-.beta.-, **apolipoprotein** A-I-contg., **detn.** of, in human, by immunoblotting and **chemiluminescence**

[illegible]
AN [illegible]
DN [illegible]
TI **Lipid** [illegible] **low** **density lipoproteins**: [illegible] fluorescence
AU [illegible]
CS [illegible]
SO [illegible]

d. **lipoproteins** LDL

oxidative

oxidative
periods of LDL oxidn.
Therefore, the sensitive and simple
semiquant. screening test for the detection of potentially
important water-sol. chain-breaking antioxidants. Conversely to O2
consumption, the absence of any initial lag phase of probe degrdn. attests
to the sensitivity of the assay. An improved methodol. based on
second-deriv. spectroscopy to follow the formation of
conjugated diene isomers directly in the prepn. without
the need for lipid extn. also confirms the sensitivity of this
assay. To assess the usefulness of
IT lipid
low density lipoprotein
IT Hydroperoxides
RL: ANST (Analytical study)
(conjugated diene, detn. of, by
second-deriv. spectrometry, lipid
by parinarate fluorescence in relation
IT Fluorometry
(lipid
d. lipoproteins detn. by, parinarate in
IT Peroxidation
(of lipids, in low-d.
lipoproteins, parinarate fluorescence in study
IT Fluorescence quenching
(lipid
low-d. lipoproteins study by
IT Lipids, biological studies
RL: BIOL (Biological study)
(peroxidn. of, in low-d. lipoproteins,
parinarate fluorescence in study of)
IT Spectrochemical analysis
(fluorometric, second-deriv., for conjugated diene
hydroperoxides)
IT Lipoproteins
RL: ANST (Analytical study)
(low-d., lipid
RL: PROC (Process)
oxidn.)
RL: PROC (Process)
lipid

(peroxyl radicals generated by, partially [illegible] decay products
by)

L[illegible] ANSWER 20 OF 22 [illegible] COPYRIGHT [illegible] ACS
AN [illegible]
DN [illegible]:94155
TI **Determination** of **lipid** hydroperoxides in **low density lipoprotein** from human plasma using high performance liquid chromatography with **chemiluminescence** detection
AU Miyazawa, Teruo; Fujimoto, Kenshiro; [illegible]
CS Dep. Food Chem., Tohoku Univ., Sendai, [illegible], Japan
SO Biomed. Chromatogr. (1990), 4(5), 231-4
CODEN: BICHE2; ISSN: 0269-3879
DT Journal
LA English
CC **9-3** (Biochemical Methods)
AB A high performance liq. chromatog. system with **chemiluminescence** detection (HPLC-CL) was used for **detg.** phospholipid hydroperoxides in human plasma **low-d. lipoprotein** (**LDL**). This system involves separation of phospholipids from **LDL**-total **lipids** with a [illegible] silica gel HPLC and post-column detection of hydroperoxides by **chemiluminescence** produced by **luminol oxidn.** during the reaction of hydroperoxide with cytochrome c-heme. By using HPLC-CL, phosphatidylcholine hydroperoxide (PCOOH) could be detected in human plasma **LDL**, and **LDL**-PCOOH concn. was higher in patients with **atherosclerosis** and hyperlipidemia than that of healthy volunteers. The **LDL**-PCOOH level was proportional to the plasma total cholesterol concn.
ST phospholipid hydroperoxide **detn lipoprotein** plasma; liq chromatog **chemiluminescence** hydroperoxide **lipoprotein**
IT **Blood analysis**
(phospholipid hydroperoxides **detn.** in **low-d. lipoproteins** in, of human by HPLC with **chemiluminescence** detection)
IT Chromatography, column and liquid
(high-performance, of **lipid** or phospholipid hydroperoxides in **low-d. lipoproteins** of human blood plasma)
IT **Lipids, analysis**
Phosphatidylcholine, **analysis**
Phospholipids, **analysis**
RL: ANT (Analyte); ANST (Analytical study)
(hydroperoxides, **detn.**, in **low-d. lipoproteins** from blood by **chemiluminescence**)
IT Hydroperoxides
RL: ANT (Analyte); ANST (Analytical study)
(**lipid**, **detn.**, in **low-d. lipoproteins** from human blood by HPLC with **chemiluminescence** detection)
IT **Lipoproteins**
[illegible]

[illegible] **detn.** **low d.**
lipoproteins [illegible]
chemiluminescence [illegible]

[illegible]

lipoproteins [illegible]
chemiluminescence [illegible]

L[illegible] ANSWER [illegible] OF [illegible] HCAPLUS COPYRIGHT [illegible] ACS
AN 1989:188713 HCAPLUS
DN 110:188713
TI **Chemiluminescence** assay for **lipid** hydroperoxides: application to monitoring **low density lipoprotein** (**LDL**) **oxidation** in vitro
AU Wieland, E.; Parthasarathy, S.; Steinberg, D.
CS Dep. Med., Univ. California, San Diego, La Jolla, CA, [illegible], USA
SO Bioluminin. Chemiluminin., Proc. Int. Bioluminin. Chemiluminin. Symp., 4th [illegible], Meeting Date 1986, 321-4. Editor(s): Schoenmoeron, J. Publisher: Wiley, Chichester, UK.
CODEN: [illegible]
DT Conference
LA English
CC **9-5** (Biochemical Methods)
AB The title assay is based on hematin-catalyzed decompn. of **lipid** hydroperoxides accompanied by O radical formation which leads to light prodn. in the presence of **luminol**. The method was used to study **oxidn.** of **low-d. lipoproteins** by endothelial cells. The assay was specific, and results were [illegible] those **detd.** by other methods.
ST **lipid** hydroperoxide **detn chemiluminescence**; **low density lipoprotein oxidn detn**
IT Artery, metabolism
(aorta, endothelium, **low-d. lipoproteins** **oxidn.** by, **chemiluminescence** assay for **detn** of)
IT **Spectrochemical analysis**
(**chemiluminescence**, for **lipid** hydroperoxides)
IT **Lipids, analysis**
RL: ANT (Analyte); ANST (Analytical study)
(hydroperoxy, **detn.** of, by **chemiluminescence** assay)
IT Hydroperoxides
RL: ANT (Analyte); ANST (Analytical study)
(**lipid**, **detn.** of, by **chemiluminescence** assay)
IT **Lipoproteins**
RL: BOT (Botanical), [illegible]
low-d., **oxidn.** [illegible], **chemiluminescence** [illegible] **detn.**
IT [illegible]
RL: ANT (Analyte); ANST (Analytical study)
(**detn.**, by **chemiluminescence** assay)

L[illegible] ANSWER [illegible] OF [illegible] HCAPLUS COPYRIGHT [illegible] ACS
AN 1988:484[illegible] HCAPLUS
DN 109:[illegible]
TI Extraction of **lipids** [illegible] **lipoproteins** [illegible] **methanol**: [illegible] chloroform-methanol

IT 9-9 [illegible]
IT Lipids [illegible]
[illegible]

MeOH-CHCl3 extn. The values obtained by both methods were identical in all cases. Thus, CH2Cl2 may replace CHCl3, as it is less toxic.

IT Serum **lipid** extn methylene chloride; **lipoprotein** **lipid** extn methylene chloride; liver **lipid** extn methylene chloride

IT Glycerides, **analysis**
Phospholipids
RL: ANT (Analyte); ANST (Analytical study)
(**detn.** of, in **blood serum** and **lipoproteins** and liver of humans and lab. animals, **lipid** extn. by methylene chloride in **methanol** for, **chloroform** compared to)

IT **Lipids, analysis**
RL: ANST (Analytical study)
(extn. of, from **blood serum** and **lipoproteins** in liver of humans lab. animals, by methylene chloride and **methanol, chloroform** compared)

IT Liver, composition
(**lipid** extn. from, by methylene chloride and **methanol**, **chloroform** compared to)

IT **Lipoproteins**
RL: ANST (Analytical study)
(**lipids** extn. from, of blood serum of humans by methylene chloride and **methanol, chloroform** compared to)

IT **Blood analysis**
(**lipids** extn. from, of humans by methylene chloride and **methanol, chloroform** compared to)

IT Extraction
(of **lipids**, from blood serum and **lipoprotein** and liver of humans and lab. animals, by methylene chloride and **methanol, chloroform** compared to)

IT 57-88-5, **analysis**
RL: ANT (Analyte); ANST (Analytical study)
(**detn.** of, in **blood serum** and **lipoproteins** and liver of humans and lab. animals, **lipid** extn. by methylene chloride in **methanol**, **chloroform** compared to)

IT **67-56-1**, Uses and miscellaneous
RL: USES (Uses)
(**lipids** extn. from blood serum and **lipoproteins** in liver of humans and lab. animals by methylene chloride and, **chloroform**)

IT [illegible]
RL: USES (Uses)
(**lipids** [illegible] lipoproteins [illegible] by **methanol** [illegible], **chloroform** [illegible])

L104 ANSWER 1 OF 8 WPIX COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 2001-125962 [14] WPIX
DNN N2001-092845 DNC C2001-036754
TI Detecting **low density lipoprotein** (**LDL**) in blood, useful for diagnosis of arteriosclerosis, by measuring a complex of **LDL** or denatured **LDL** with an acute phase reactant or a fibrinolytic related protein.
DC B04 D16 S03
IN MASHIBA, S; NISHIDA, K
PA (IKAG-N) IKARIAKU KK LTL; (NISH-I) NISHIDA K
CYC 15
PI EP 1070962 A2 20010124 (200114)* EN 25p G01N033-92 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
JP 2001091517 A 20010406 (200126) 15p G01N033-92 <--
ADT EP 1070962 A2 EP 2000-114984 20000720; JP 2000012917 A JP 2000-12210 20000120
PRAI JP 2000-12210 20000120; JP 1999-207413 19990722
IC ICM **G01N033-92**
ICS C07K014-47; C07K014-745; C07K016-18; C07K016-30; C12N015-09; G01N033-53; G01N033-577; G01N033-68
ICA C12P021-08
AB EP 1070962 A UPAB: 20010301
NOVELTY - A novel method for determining **low density lipoprotein** **LDL**, and denatured **LDL** in blood is using as a measuring subject a complex of **LDL** or denatured **LDL** (containing **oxidized LDL**) with an acute phase reactant, blood coagulation protein, fibrinolytic related protein or disinfectant substance produced by macrophage. The **LDL** in the complex is not **oxidatively** denatured.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a method for determining a novel **lipoprotein** in blood arteriosclerotic lesion using an antihuman fibrinogen antibody and an immune reaction detecting reagent such as an antihuman ApoB antibody labeled with a labeling substance, typically horseradish peroxidase; and
LDL
low density lipoprotein (**LDL**).
USE - The method is useful for determining **low density lipoprotein** (**LDL**).

lipoprotein

Alternatively, the measuring subject is a complex of a modified fibrinolytic related protein such as a tissue factor, plasmin, prothrombin, thrombin, activated protein C, plasmin activator inhibitor 1, etc., with **LDL** or denatured **LDL**. Alternatively, the measuring subject is a complex of a modified substance in macrophage such as myeloperoxidase, cathepsin, lipoxygenase, etc., with **LDL** or denatured **LDL**. The method is an immunological measuring method such as an enzyme immunoassay, latex flocculation method, immunological chromatography, **spectrochemical** analysis, or immunochromato method.

L104 ANSWER 2 OF 8 WPIX COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 2001-061704 [07] WPIX
DNN N2001-046244 DNC C2001-017179
TI **Stabilization** of denatured **lipoprotein** by freeze-drying it ... as a standard for assay of the denatured **lipoprotein** ... assay of physiological activity.
DC B04 D16
IN KIMURA, J; KOHNO, H; SHIGEMATSU, T; SHIMAMURA, T; UCHIDA, K
PA (VESS-N) VESSEL RES LAB CO LTD
CYC 27
PI WO 2000075189 A1 ... RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL OA PT SD SE SL SZ TZ UG ZW W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000047818 A 20001128 (200119) C07K014-775
ADT WO 2000075189 A1 WO 2000-JP3413 20000526; AU 2000047818 A AU 2000-47818 20000526
FDT AU 2000047818 A Based on WO 2000075189
PRAI JP 1999-155198 19990602
IC ICM C07K014-775
ICS G01N033-92
ICA C07K016-18
AB WO 2000075189 A UPAB: 20010301
NOVELTY - A method for the preparation of stabilized artificially denatured **lipoprotein** by freeze-drying it the **lipoprotein** after denaturation, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIM are also included for the following:
(1) the artificially denatured **lipoprotein** ...;
... the artificially denatured **lipoprotein** ...
... **lipoprotein** ...
USE - As a standard substance for assay of denatured **lipoprotein** ... **lipoprotein**-related physiological activity in the examination, diagnosis of diseases such as arterial sclerosis, cerebral infarction, cerebral sclerosis, renal failure, hepatic disease, and myocardial infarction.
DESCRIPTION OF DRAWINGS - The ... LDL ...

lipoprotein [illegible] very low density
lipoprotein VLDL , low density
lipoprotein LDL , lipoprotein [illegible]
lipoprotein [illegible] , [illegible] **lipoprotein**
(HDLP) or chylomicron.
Preferred Method: Denaturation is by **oxidation** [illegible]
such as copper or iron ion, or by acetylation or treatment with
malondialdehyde. A stabilizing agent may be added [illegible],
such as sucrose, lactose, trehalose, bovine serum albumin (BSA) or human
serum albumin (HSA). The stabilized denatured **lipoprotein** is
reactive with anti-DLH3 antibody secreted by the mouse/mouse hybridoma
FOH1a/DLH3 (FERM BP-7171) and may be used as a standard in immunochemical
assay methods such as radioimmunoassay, enzyme immunoassay, [illegible]
or **luminescence** immunoassay and [illegible] immunoassay, and
especially for sandwich enzyme immunoassay [illegible].

L104 ANSWER [illegible] WPIX [illegible]
AN 1999-191282 [16] WPIX
DNC C1999-053035
TI Determination of **lipid oxidisability** - by fluorescent
assay using a diphenylhexatriene marker initiated with copper ions.
DC B04 D16 E14 J04 S03
IN HERMETTER, A; HOFER, G; LICHTENBERG, D
PA (HERM-1) HERMETTER A; (HOFE-1) HOFER G; [illegible]
[illegible]
PI AT 9401675 A 19990215 (199916)* 17p [illegible]
AT 405695 B 19990815 (199937) [illegible]
ADT AT 9401675 A AT 1994-1875 19941004; AT 405695 B AT 1994-1875 19941004
FDT AT 405695 B Previous Publ. AT 9401675
PRAI AT 1994-1875 19941004
IC ICM **G01N033-92**
AB AT 9401675 A UPAB: 19990424
Method for determining the **oxidisability** of lipids comprises
incorporating diphenylhexatriene (DPH) or lipid conjugates containing
covalently bound DPH into **lipoproteins**, initiating
oxidation of these markers with Cu2+ or other **oxidation**
initiators, and measuring the decrease in fluorescence intensity over
time.
USE - To diagnose or determine predisposition for atherosclerosis and
coronary heart disease; to diagnose or determine predisposition for
sickle-cell anaemia, cancer or Alzheimer's disease; [illegible] determine the
storage stability of foods.
ADVANTAGE - [illegible]
[illegible]
[illegible] **oxidisability** [illegible]
oxidation; [illegible]
samples using a single number.
[illegible]
FS CPI EPI
FA AB; DCN
MC CPI: B04-B; B04-E; B04-F; B04-G; B04-H; B04-P; B04-R; B04-S; B05-A; B05-B;
B11-A; B11-C; B11-E; B11-F; B12-K; B14-A; B14-B;
B14-H; B14-J; B14-K; B14-L; B14-N; B14-S; B14-T;
B14-U; B14-V; B14-W; B14-X
ECI: S03-E04E;

[illegible]
oxidisability [illegible] conjugated diene
[illegible] lipid fraction.
[illegible]
[illegible]

PI [illegible]
AET [illegible]
PRAI [illegible]
IC G01N021-76
G01N033-92
AB [illegible]
Method for determining the **oxidisability** of **low-density lipoproteins** (**LDL**) in a sample of plasma sample from a mammal comprises: (a) isolating an **LDL fraction** from the sample; (b) separating a lipid **fraction** from the **LDL fraction**; and (c) determining the amount of **conjugated dienes** in the lipid **fraction**.

USE - The method is used for assessing risk of atherosclerosis and coronary heart disease or for diagnosis, management and treatment of atherosclerosis and coronary heart disease.

[illegible]
FS PHI EPI
FA AB
MC CPI: B04-B01B; B04-B04D4; B04-N02; B11-A05B; B11-C04A; B11-K04A
EPI: **S03-E04E**; S05-B10; S05-E10B.

L104 ANSWER [illegible] MEIN [illegible]
AN 1997-547725 [illegible] WPIX
DNN N1997-288286 DNC C1997-172189
TI Process for detecting **oxidised lipid** and estimating its acid value - comprises adding lanthanide shift reagent to specimen and subjecting to **spectroscopy**.
DC B04 D23 J04 S03
PA (KOIK-I) KOIKE K
[illegible]
PI JP 09143492 A 19970603 (199732)* [illegible]
ADT JP 09143492 A JP 1995-353866 19951117
PRAI JP 1995-353866 19951117
IC ICM C11C003-00
ICS C11C001-08; G01N021-03; G01N031-
AB JP 09143492 A UPAB: 19970806
Process for detecting the presence of a water-soluble **oxidised** lipid comprises (1) adding a lanthanide shift reagent to a specimen and (2) subjecting the resultant mixture to **spectroscopy**.

Also claimed is a process for forming a water-soluble **oxidised** lipid by (1) adding superoxide dismutase and [illegible] to (i) emulsion prepared by dissolving linoleic acid in buffered methyl [illegible] and (ii) [illegible] **low density lipoprotein** [illegible]

[illegible] - [illegible] lipoprotein.

[illegible]
PI PHI EPI
FA AB; IPC
MC PHI: B04-B01B; B11-C04B2; B11-A04; B11-A05; [illegible]
EPI: S03-E04A; [illegible]

L4 ANSWER [illegible] MEIN [illegible]

PN [illegible]
DS [illegible]
JP 2920044 B2 19990719 (199934)
EP 631138 B1 20001122 (200060) EN
R: BE DE FR GB NL
DE 69329697 E 20001228 (200107)
ANT EP 631138 A1 EP 1993-111276 19930714; JP [illegible] A JP 1993-144170 19930512; US 5561052 A CIP of US 1993-[illegible] 19930616, US 1994-[illegible] 19950519; JP 2920044 B2 JP 1993-144170 19930512; EP 631138 B1 EP 1993-111276 19930714; DE 69329697 E DE 1993-629697 19930714, EP 1993-111276 19930714
PDT JP 2920044 B2 Previous Publ. JP [illegible]; [illegible]
IRAI JP 1993-144170 19930512; [illegible]
REP 08Jn1.Rel; [illegible]
IC ICM C12Q001-26; G01N033-92; [illegible]
ICS G01N024-08; G01N033-00; [illegible]
ICA C07C409-00; C11C003-00
AB EP 631138 A UPAB: 20010202
The following are claimed: (A) a process for detecting and determining an **oxidised** lipid comprising adding a lanthanide shift reagent to a specimen and subjecting the resulting mixt. to **spectroscopy**; B a process for forming an **oxidised** lipid comprising: (a) adding superoxide dismutase (SOD) and [illegible] to [illegible] an emulsion prepd. by dissolving linoleic acid in deuterated methanol and adding the soln. to deuterated phosphate buffer while stirring, a [illegible] **low-density lipoprotein** soln. dialysed against an undeuterated phosphate buffer; and (b) irradiating the mixt. with long-wave UV light; (C) a process for determining an antioxidant in an **oxidised** lipid, comprising forming an **oxidised** lipid by process (B), adding dysprosium tripolyphosphate shift reagent to the **oxidised** lipid, and analysing the mixt. by proton- NMR **spectroscopy** by means of a nuclear magnetic resonance **spectrometer**.
USE - Disclosed objects are to provide a process for simply and precisely determining a specimen of an **oxidised** lipid, a process for forming a water-soluble **oxidised** lipid having a hydroperoxide gp. which has specific inhibitory activity, and a process capable of directly determining an **oxidised** lipid in a biological sample such as plasma.
Dwg.0/11
FS [illegible]
FA AB; GI
MC [illegible]
DRN [illegible]
A process for determining the presence or amount of **oxidized** lipid in a specimen, main process comprising adding a lanthanide shift reagent to a specimen and subjecting the resultant mixture to **spectroscopy** to detect the presence or amount of **oxidized** lipid, where the **oxidized** lipid is [illegible] **oxidized** [illegible]

oxidn. [illegible] lipoprotein
lipid [illegible] spectroscopy.

PI [illegible]
DS [illegible]
IC [illegible]
AB WO 9321517 A UPAB: 19931213
A method for predicting atherosclerotic risk in a living patient, comprises; (a) subjecting a **lipoprotein**-contg. blood component sample to nuclear magnetic resonance **spectroscopy**; (b) measuring the area of the olefinic region resonance; (c) **oxidising** the sample of step (a); (d) incubating the sample of step (c); (e) and recording the sample of (d) by NMR **spectroscopy**; (f) measuring the area of the olefinic proton resonance; (g) determining the area of the olefinic region obtd. in step (b) with the area of the olefinic region obtd. in step (f); (h) measuring the percent change in olefinic area by subtracting the [illegible] step (g) from the [illegible] step (f); and (i) correlating the [illegible] the percentage increase in [illegible] area [illegible]
Also claimed is a method for predicting [illegible] where step (b) comprises measuring the ratio of 2.0 and 2.8 ppm in the proton **spectrum**.
ADVANTAGE - The process operates on any lipid contg. body fluid, blood or bone marrow plasma. The new process tests a patients propensity for developing atherosclerosis by measuring the **oxidisability** of plasma **lipoproteins** and lipids.
Dwg.0/2
FS CPI EPI GMPI
FA AB
MC CPI: B04-B04A6; B04-B04L5; B05-C04; B11-C05; B12-N04A; B07-H04
EPI: S03-E07; S03-E14B1; S03-E14B7

L1[illegible] ANSWER [illegible] OF [illegible] WPIX COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1993-[illegible] [19] WPIX
DNN N1993-068218 DNC C1993-[illegible]
TI Blood serum or plasma **chemiluminescence** determn. - includes addn. of ferrous salt soln. to initiate flash after pretreatment with calcium chloride and heparin and **lipoprotein** supn..
DC [illegible]
IN [illegible]
PA [illegible]
CP [illegible]
[illegible]
AB [illegible] B [illegible]
determn. of **chemiluminescence** [illegible] useful in diagnosis of [illegible] [illegible] [illegible] [illegible] with [illegible] [illegible] **chemiluminescence** [illegible] [illegible]. [illegible]

[illegible] low density lipoprotein
fraction [illegible]
[illegible] lipoprotein
[illegible]

```
      (FILE 'HOME' ENTERED AT 15:19:
                SET NOT OFF

      FILE 'REGISTRY' ENTERED AT
L1              2 S 9005-49-6 OR 9041-08-1
L2              1 S CHLOROFORM/CN
L3              1 S METHANOL/CN
L4
L5
L6              4 S L4 AND
L7              3 S L6 AND
L8              2 S L6 AND H2O
L9              1 S CYCLOHEXANE/CN
L10             1 S LUMINOL/CN
                  E ABAP/CN
                  E "2,2'-AZOBIS(2-AMINOPROPANE)"/CN
L11             2 S E3,E4
L12             6 S 41556-11-0/CRN
L13             2 S L12 AND
L14             4 S L11,L13

      FILE 'HCAPLUS' ENTERED AT
                  E LIPOPROTEIN
L15         21916 S E3,E4 (L) (LOW DENSITY OR LOW
L16          2903 S E3,E5 (L) LDL
L17         22241 S L15,L16
L18         32066 S (LIPOPROTEIN OR LIPO PROTEIN)(L)(LDL OR LOW DENSITY OR LOW
L19         32066 S L17,L18
L20         10735 S (LIPOPROTEIN OR LIPO PROTEIN) (L)VLDL OR VERY LOW DENSITY
L21          6673 S LIPOPROTEIN#/CW(L)(VLDL OR VERY LOW DENSITY OR VERY LOW
L22
L23         15198 S LIPOPROTEIN#/CW(L)(HDL OR HIGH DENSITY OR HIGH
L24           101 S LIPOPROTEIN#/CW(L)(VHDL OR VERY HIGH DENSITY OR VERY HIGH
L25           196 S (LIPO PROTEIN OR LIPOPROTEIN)(L)VHDL OR VERY HIGH DENSITY OR
L26         17014 S (LIPO PROTEIN OR LIPOPROTEIN)(L)HDL OR HIGH DENSITY OR HIGH
L27         41874 S L22-L26
L28
L29
L30
L31

      FILE 'BIOSIS' ENTERED AT
L32

      FILE 'HCAPLUS' ENTERED AT
L33
L34
L35
L36
```

```
L48             1 S [illegible]
L49             1 S [illegible] PBN
L50            13 S L47 AND L[illegible]
L51             4 S L47 AND (BIT OR BIN)

     FILE 'HCAPLUS' ENTERED AT [illegible] IN [illegible]
L52            [illegible] S L45,L46,L47 AND L1
L53            11 S L52 AND (Y OR HEXANE)
L52            78 S L46-L48,L50,L51
               E AHOTUPA M/AU
L53             1 S E3,E4 AND L52
               E OY /PA,CS
L54             5 S E6,E7
               E ABOATECH/PA,CS
L55             6 S E3-E6
L56             5 S OY (L) ABOATECH? (A) C
L57             1 S L52 AND L48-L54
L58            14 S AHOTUPA M?/AU AND L2
L59             1 S L54-L56 AND L57
L60            13 S L58,L59
L61             [illegible] S L[illegible] AND [illegible],PY
L62             4 S L[illegible],L60,L61
L63            20 S L52 AND [illegible]SC,SX
L64             1 S L52 AND FIT
               E TEST FIT,CT
               E E4+ALL
L65             1 S L52 AND E2
L66             1 S L52 AND E2,E3,E4/BI
L67             5 S L62,L64-L66
L68             2 S L63 AND (PHYTOSTEROL? OR APOLIPOPROTEIN?)/TI
L69            14 S L63 NOT L68
L70            21 S L67,L69
L71            54 S L52 NOT L63-L70
L72             2 S L71 AND DIFFERENT/TI
L73             1 S L72 NOT HORSERADISH
L74            22 S L70,L73
L75            22 S L74 AND (?PROTEIN? OR BASELINE OR BASE LINE OR CONJUGAT?(L)HIEN
L76             8 S L75 AND (ISOLAT? OR PURIF? OR FRACTION? OR FRAGMENT?)
L77            22 S L75,L76
L78            22 S L77 AND (MEASUR? OR SCREEN? OR INVESTIGAT? OR DETERMIN? OR AN
               SEL HIT RN

     FILE 'REGISTRY' ENTERED AT [illegible]
[illegible]
[illegible]

[illegible]

     FILE 'ANSWERS' ENTERED AT [illegible]

     FILE 'HCAPLUS' ENTERED AT 15:54:[illegible]

     FILE 'WPIX' ENTERED AT [illegible]
               E AH [illegible] M A?
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L[illegible] [illegible] S [illegible]
L[illegible] [illegible] S [illegible]
L[illegible] [illegible] S [illegible]
L[illegible] [illegible] S L[illegible] AND L[illegible]-L[illegible]
L[illegible] [illegible] S L[illegible], L[illegible]-L[illegible], L[illegible]
L[illegible] [illegible] S L[illegible] AND [illegible]
L[illegible] [illegible] S L[illegible] NOT [illegible]
L[illegible] [illegible] S L[illegible] NOT L[illegible]
L[illegible] [illegible] S L[illegible] AND [illegible]
L[illegible] [illegible] S L[illegible], L[illegible]
L[illegible] [illegible] S L[illegible], L[illegible]
L104 6 S L103 AND L82-L103

FILE 'WPIX' ENTERED AT [illegible]